

# **Korean Experience of Overcoming Economic Crisis through ICT Development**

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## 1. 1997 Economic crisis and the role of ICT

► **Miracle of Han River:** GNI per capita: 1962, 110\$ → 2007, 19,730\$

► **1997 economic crisis:** US\$ 10,770 in 1995 → US\$ 9,200 in 1998

► **The role of ICT in the course of economic recovery**

Extensive reforms in corporate, financial, and public sectors

Key player in the process of recovery

- ICT portion to GDP: 7.7% in 1997 → 15.3% in 2000
- ICT contribution to GDP growth: 46 percent in 2000

Share of ICT manufacturing in total manufacturing value added (2006)

	ICT manufacturing	Percentage point change('95-'06)
Australia	2.8	-0.3
Canada	4.6	-1.6
Czech Republic	5.0	2.2
Denmark	4.8	0.4
Finland	20.1	11.4
France	5.2	-1.1
Germany	5.6	1.0
Hungary	12.6	7.8
Ireland	11.5	-2.7
Japan	12.8	0.2
<b>Korea</b>	<b>21.1</b>	<b>5.1</b>
Mexico	5.6	0.4
Netherlands	3.8	-2.4
Norway	4.6	0.2
Portugal	2.8	-1.0
UK	6.0	-2.3
US	7.7	-2.6
OECD average	7.2	0.3

## 2. Result of ICT Development after Economic Crisis

### ► Change of Top 10 Leading Industries in Manufacturing Sectors

Rank	1970	1980	1990	2000	2005
1	Food 28.6	Textile 19.2	Electronics 14.6	Electronics 25.2	Electronics 24.7
2	Textile 20.4	Food 19.0	Automobile 13.2	Chemicals 13.9	Chemicals 15.2
3	Chemicals 11.5	Chemicals 13.1	Food 12.9	Automobile 11.3	Automobile 12.2
4	Automobile 9.1	Electronics 10.4	Chemicals 12.9	Basic metal 8.0	Basic metal 11.3
5	Paper 5.5	Basic metal 6.7	Textile 11.5	Food 6.9	Machinery 7.0
6	Mineral products 3.7	Automobile 6.1	Basic metal 9.0	Machinery 6.9	Food 6.1
7	Coal & petroleum 4.2	Coal & petroleum 5.5	Mineral products 5.6	Textile 6.9	Coal & petroleum 5.4
8	Electronic products 3.7	Nonmetallic minerals 5.3	Machinery 5.5	Fabricated metals 4.8	Fabricated metals 4.5
9	Machinery 2.3	Paper 3.9	Paper 4.6	Paper 4.3	Textile 3.6
10	Basic metal 1.5	Machinery 3.7	Fabricated metals 3.8	Coal & petroleum 4.2	Paper 3.5

## ► Telecommunications sector

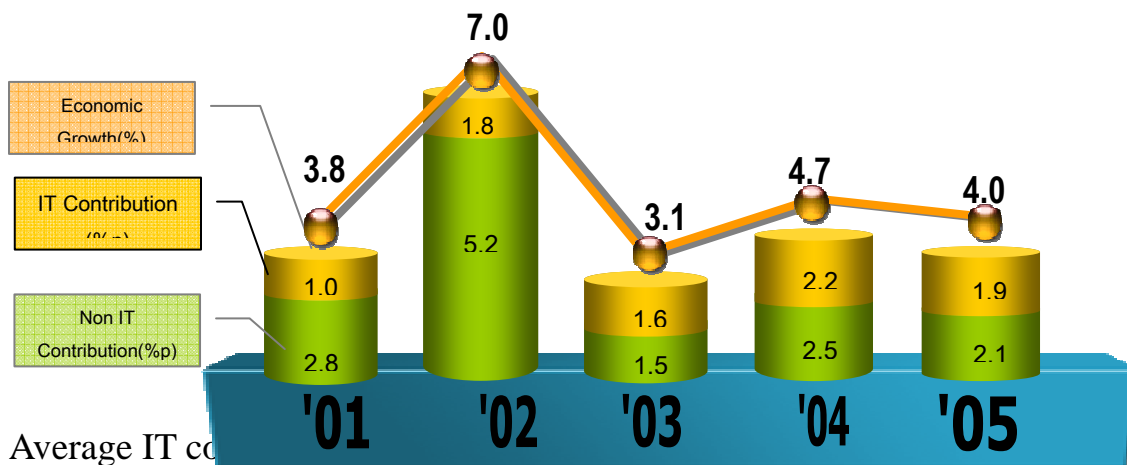
Broadband subscribers/100 people: 4<sup>th</sup> (29.9%) among OECD in 2007

- Over 76% of Koreans use Internet in their everyday lives
- 93% of households connected to broadband internet service

[ IMD World Competitiveness Yearbook 2005 ]

Technological Infrastructure			Broadband Subscribers			Broadband Cost		
Country	%	Rank	Country	Rank		Country	US\$	Rank
US	68.93	1	Korea	233.3	1	Japan	0.09	1
Korea	63.35	2	Hong Kong	180.9	2	Korea	0.25	2
Singapore	62.72	3	Canada	146.9	3	Belgium	1.15	3
Hong Kong	61.18	4	Taiwan	134.6	4	Hong Kong	1.27	4
Taiwan	60.45	5	Denmark	133.3	5	Singapore	2.21	5
			# of subscribers per 1,000			US\$ per 100 kbps per month		

## ► ICT manufacturing sector



IT exports(2004): 93.7 billion \$ (36.9% of total exports)

## ► Innovating government services based on ICT

5<sup>th</sup> in UN Global E-Government Readiness Report 2004

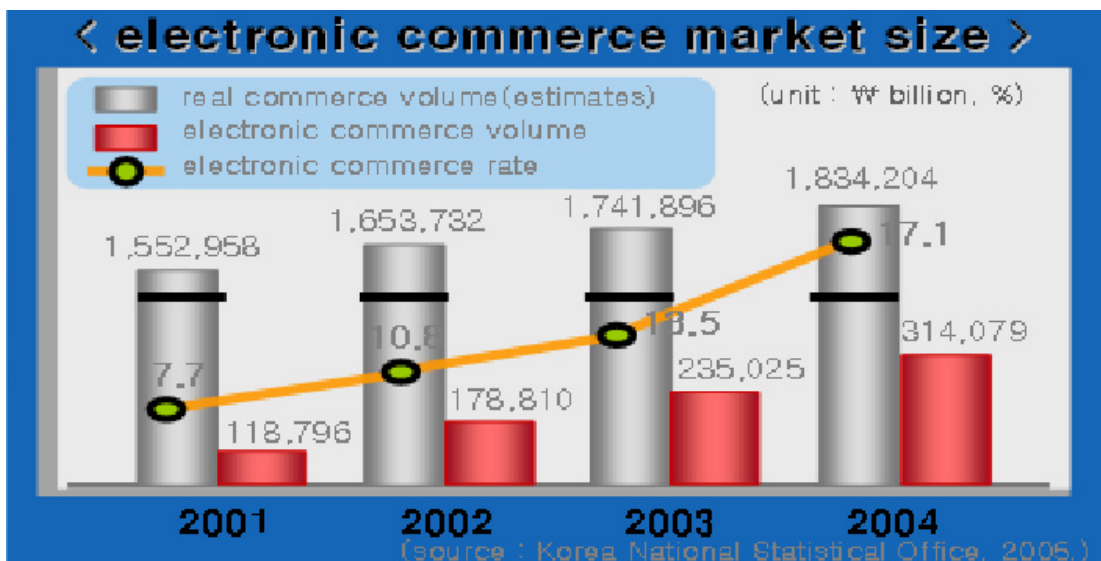
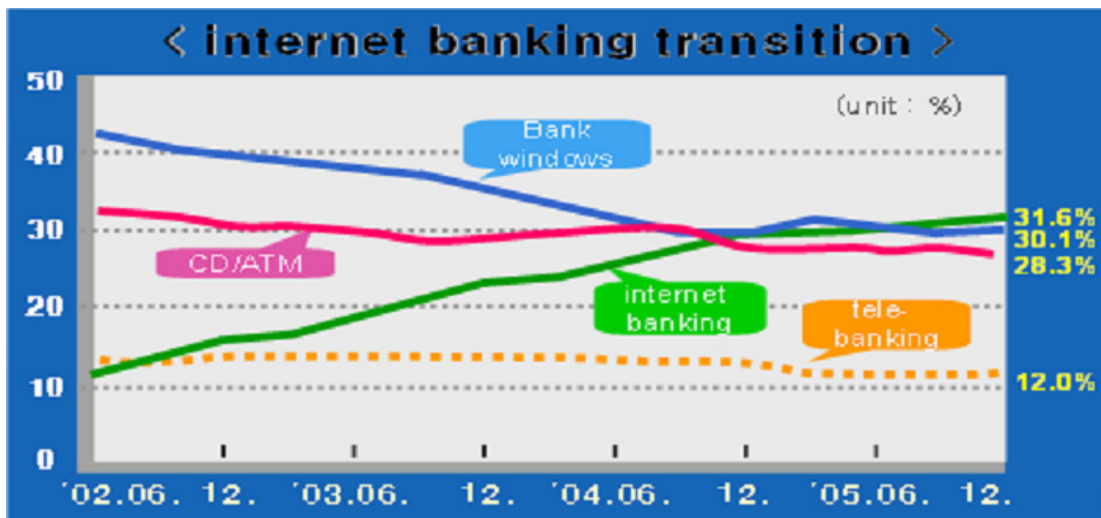
- Only nation that does not use English as mother tongue among Top 10

#### e-Procurement service (G2B)

- full-fledged e-government procurement system
- received the First Public Service Award sponsored by the UN in 2003

#### ► People's online life

In 2004, OECD declared Korea's national e-commerce system needed 'no further action required'



### 3. Major Tools to Develop ICT

#### ► Three ambitious mid-term ICT development plans

## 1 Basic act & 3 master plans for development of information society

- Informatization Promotion Act(1995)
- Master Plan for Informatization Promotion(1996)
- CYBER KOREA 21(1998)
- e-KOREA VISION 2007(2003)

### ► **Government reorganization**

Informatization Promotion Committee (1996) chaired by the Prime Minister

Informatization Strategy Meeting (1998) chaired by the President

Establishment of Ministry of Information and Communication (1994)

### ► **Construction of Korean Information Highway**

The 10-year Korea Information Highway Plan (1995)

- By 2000, fiber optic networks in 144 regions nationwide were completed, and 1,400 rural areas had access to broadband networks
- Paved physical infrastructure for e-government projects in early 2000s
- 31,632 governmental organizations use KII-G network

### ► **Enhancing telecommunications service market competition**

Opened broadband Internet service market without regulation or controls over licensing and pricing

Encouraged facility-based competition among service providers

- Downward pressure on tariffs → created more demand

### ► **Lifting up ICT demand by ICT training**

Extensive role of the government in creating demand

- Internet and computer literacy programs targeting 10 million people
- Over 4,000 free-of-charge information facilities
- All schools connected with the Internet for free or at discounted rates

### ► **Providing major government services through online**

Government for Citizens (G4C) system interconnects resident registration, real estate, vehicle registration

97% of government documents dealt with e-approval system

The Home Tax Service (HTS) allows taxpayers to file tax returns, receive e-Bills, and process e-Payments from their homes

47,000 public institutions and 138,000 private businesses use government e-procurement system

## **4. Implications from Korean Experience**

Four success factors



- First, the President took a strong initiative for nation-wide informatization supported by comprehensive policy strategy by MIC
- Second, Bridging digital divide and boost self sustaining demand by informatization training program
- Third, Creating competitive environment for telecom service providers.
- Fourth, Government initiative to develop basic IT technologies

#### Behind story of four success factors

- Creation of ICT promotion fund, powerful tools to make four factors work smoothly
- Source of fund: government budget contribution, telecommunications service operators' contribution (certain amount of yearly revenue prescribed by their license), auction price for radio wave frequency, dividend from government owned company
- Size of this fund: several billions USD in early 2000

By this funding mechanism, government could drive its ICT Master plans very powerfully

- Invest in IT R&D, training IT human resource, standardization, R&D environment creation and loan to IT venture
- ICT fund created right before 1997 Korean economic crisis and operated smoothly even in times of economic crisis